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MIL-PRF-55339/48A (USAF)
 29 December 1988
 SUPERSEDING
 MIL-A-55339/48 (USAF)
 10 April 1977

PERFORMANCE SPECIFICATION

ADAPTER, CONNECTOR, COAXIAL, RADIO FREQUENCY,
 (BETWEEN SERIES SMA TO SERIES TNC), CLASS 2, STRAIGHT PLUG

This specification is approved for use by the Department of the Air Force and is available for use by all Departments and Agencies of the Department of Defense.

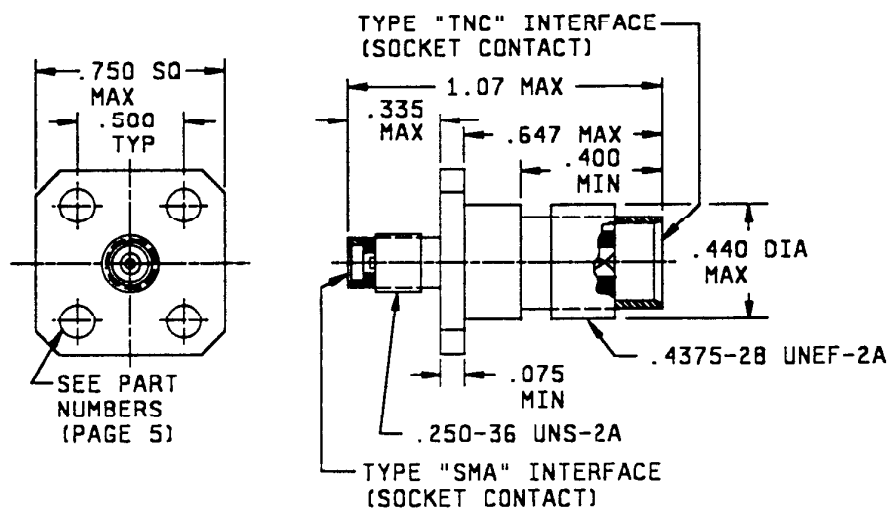
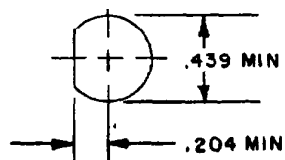
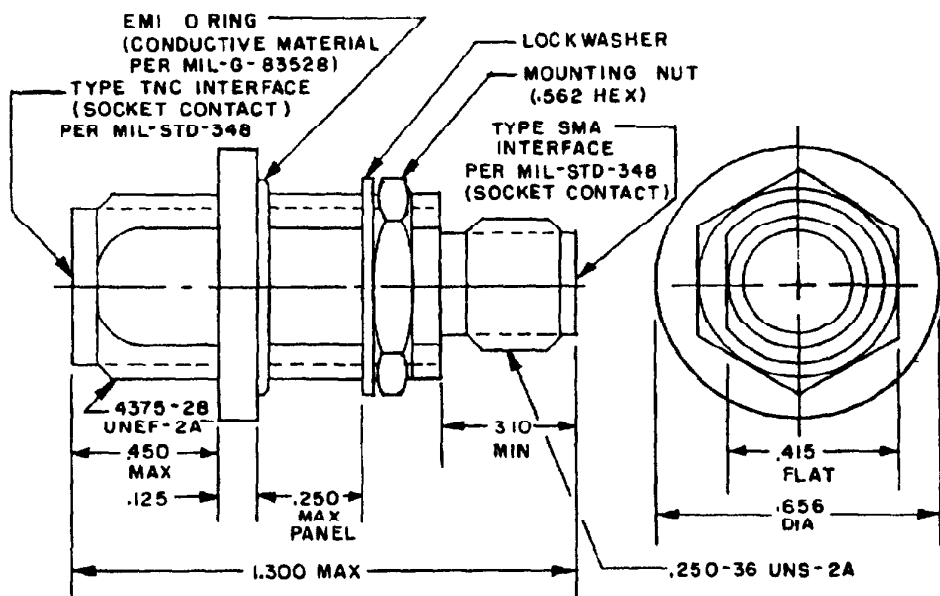


FIGURE 1. General configuration.

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RECOMMENDED MOUNTING HOLE

Inches	mm	Inches	mm
.010	0.25	.4375	11.113
.015	0.38	.439	11.15
.075	1.91	.450	11.43
.125	3.18	.500	12.70
.204	5.18	.562	14.27
.250	6.35	.647	16.43
.310	7.87	.656	16.66
.335	8.51	.750	19.05
.400	10.16	1.07	27.2
.415	10.54	1.300	33.02
.440	11.18		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.015 (0.38 mm).
4. All undimensioned pictorial configurations are for reference purposes only.
5. Interfaces shall be in accordance with MIL-STD-348.

FIGURE 1. General configuration - Continued.

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ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 15 GHz.

Voltage rating:

335 V rms at sea level.

85 V rms at 70,000 feet.

Operating temperature range: -65°C to +165°C.

Performance: Installation torque 7 to 10 inch-pounds, series SMA; 4 to 6 inch-pounds series TNC.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and MIL-STD-348.

Center contact retention:	<u>Series SMA</u>	<u>Series TNC</u>
Axial force (pounds, minimum) - - - -	6	6
Torque - - - - -	Not applicable	Not applicable
Force to engage and disengage:	<u>Series SMA</u>	<u>Series TNC</u>
Longitudinal force (pounds, maximum)	Not applicable	Not applicable
Torque (inch-pounds, maximum) - - - -	2	2
Mating characteristics:	<u>Series SMA</u>	<u>Series TNC</u>
Center contact (socket):		
Overside test pin diameter (inch) -	.0375 + .0001	.057 diameter minimum (nonclosed entry contacts only)
Insertion depth (inch, minimum) -	.030/.045	.125
Number of insertions - - - - -	3	1
Pin finish (microinches) - - - - -	16	---
Maximum test pin (insertion force test):		
Steel test pin diameter (inch, minimum)	.0370 + .0001	.054
Pin finish (microinches) - - - - -	16	16
Insertion force (pounds, maximum) -	3	2
Insertion depth (inch, minimum) - -	.050/.075	---

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Minimum test pin (withdrawal force):	<u>Series SMA</u>	<u>Series TNC</u>
Steel test pin diameter (inch)	.0355 - .0001	.052
Pin finish (microinches) - - - - -	16	16
Withdrawal force (ounces, minimum) -	1	2
Insertion depth (inch, minimum) - -	.050/.075	---

Permeability: Less than 2.0, air = 1.0.

Seal:

Pressurized: Not applicable.

Weatherproof: Not applicable.

Insulation resistance: 5,000 megohms, minimum.

VSWR:

1.05 + .008 F (GHz) at .5 to 12.4 GHz.

1.09 + .009 F (GHz) at 12.4 to 15 GHz.

RF leakage (total): -65 dB, minimum, 2 to 3 GHz.

RF insertion loss: .18 dB, maximum, at 9 GHz.

Durability: 500 cycles minimum at 12 cycles per minute, maximum, the adapter shall meet the mating characteristics and force to engage disengage requirements.

Dielectric withstanding voltage:

Test voltage: 1,000 V rms, minimum (sea level).

Contact resistance (milliohms, maximum):

<u>Contact</u>	<u>Initial</u>	<u>After environmental</u>
Center	4.1 <u>1/</u>	6.0
Outer	2.2	Not applicable

Vibration, high frequency:

Interruptions: 1 μ s, maximum, test condition D.

Shock: Method 213 of MIL-STD-202, test condition I.

Thermal shock: Method 107 of MIL-STD-202, test condition C.

Moisture resistance: 200 megohms, minimum, within 5 minutes after removal from humidity.

Salt spray: Method 101 of MIL-STD-202, test condition B.

1/ Two center contacts must be mated to the center conductor under test, therefore doubling "center contact" resistance.

Corona level:

Voltage: 250 V, minimum.

Altitude: 70,000 feet, minimum.

RF high potential withstanding voltage:

RF voltage: 1,000 V rms, minimum.

Frequency: 5 MHz, minimum.

Group qualification: See table I.

Part or identifying numbers (PIN): Also see table II.

M55339/48-00002	(for .125 inch diameter through holes).
M55339/48-00003	(tapped holes to accomodate 3-56 UNF mounting screws).
M55339/48-30001	(for .125 inch diameter through holes).
M55339/48-30002	(tapped holes to accomodate 3-56 UNF mounting screws).
M55339/48-00004	(jam-nut mounted).
M55339/48-30003	(jam-nut mounted).

Marking: As specified in MIL-A-55339.

TABLE I. Group qualification.

Group	Submission and qualification of any of the following adapters	Qualifies the following adapters
1	M55339/48-00002 M55339/48-00003 M55339/48-00004	M55339/48-00002 M55339/48-00003 M55339/48-00004
2	M55339/48-30001 M55339/48-30002 M55339/48-30003	M55339/48-30001 M55339/48-30002 M55339/48-30003

NOTE: When a QPL source is obtained, DESC drawing 85018 will be canceled.

TABLE II. Cross reference of part or identifying numbers.

Preferred part or identifying number	Superseded part or identifying number
M55339/48-00002	M55339/48-00001

Revision letters are not used to denote changes due to the extensiveness of the changes.

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CONCLUDING MATERIAL

Custodians:
Air Force - 85
NASA - NA

Review activities:
Air Force - 11, 99
DLA - ES

User activity:
Air Force - 19

Preparing activity:
Air Force - 85

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